

*A. J. Cook*

information, a list of user preferences, or other information about each of the users of a particular site.

Please replace the paragraph beginning at line 30 of page 1 with the following:

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Therefore, there is a need for a system that is efficient in handling large numbers of transactions. Furthermore, there is a need for a system that does not introduce interdependencies between each of the pages of the database. Thus, if one of the pages is contaminated, the other pages remain unaffected by the contamination.

#### REMARKS

Claims 1-38 are pending in this application and stand rejected. The detailed description is amended only to correct typographical errors. No new matter is being added.

The Examiner rejected claims 1-38 under 35 USC 103(a) as being unpatentable over Nguyen in view of Nemes. Applicants respectfully traverse these rejections.

Claim 1 recites:

1. A method of managing a database that includes a plurality of sections, each of the sections comprising a plurality of data records, the method comprising:  
receiving a new data record and a key that is associated with the new data record;  
identifying one of the sections based upon the associated key of the new data record;  
deleting one or more data records from the identified section if the identified section does not have sufficient space to contain the new data record; and

storing the new data record in the identified section.

Claim 1 generally includes a method for storing data records in a database made up of a number of sections, and deleting records from a section when there is insufficient room to store a new record. Neither Nguyen nor Nemes teaches, suggests or discloses the claimed invention, either alone or in combination with one another.

Nguyen describes a method for hashing records in a large database of a speech recognition system. Memory blocks spanning the entire range of hash values receive data associated with records to be hashed. As each memory block fills, its contents are written to an intermediate file associated with the memory block in secondary storage. The intermediate files are then retrieved and their contents ordered and written to secondary storage as a single hash table. Nguyen's system purports to reduce the number of disk accesses required to store and retrieve data from the speech recognition database, and therefore accelerates the hashing process. However, Nguyen does not disclose the claimed invention, as acknowledged by the Examiner.

However, contrary to the Examiner's assertion, the addition of Nemes does not cure the deficiencies of Nguyen. Nemes discloses a method for information storage and retrieval using a hashing technique with external chaining (linked lists) and on-the-fly removal of expired data. Nemes does not teach, suggest or disclose "deleting one or more data records from the identified section if the identified section does not have sufficient space to contain the new data record." Nemes instead discloses deleting expired records when they are encountered during a search. By contrast, claim 1 recites deleting a data record when there is not enough space to contain a new data record. In Nemes' system, if the database were full and no records had expired, it would not be possible to add a new data record. In contrast, the claimed invention allows for a record to be deleted when there is insufficient space. In general, whether a record is expired is

logically unrelated to whether a section of the database is full. Therefore, Nemes cannot suggest the claimed invention either alone or in combination with Nguyen. Claim 1 is patentable over the cited references. Independent claims 8 and 30 are also patentable over the cited references for at least the same reasons as claim 1.

With respect to claims 2, 9 and 31, the claims derive patentability from their dependence upon patentable independent claim 1. In addition, Nemes actually teaches away from the concept of ranking recited in claims 2, 9 and 31. Nemes discloses removing data records that have expired when compared with "some external condition" (col. 6, line 9). In contrast, in the claimed invention records are ranked against one another, for example by comparing when each of the data records was last used and then removing the least-recently-used record.

In addition, claims 3-7, 9-29 and 32-38 are patentable over the cited references both because they depend from patentable independent claims, and because they recite their own patentable features.

In light of these Remarks, the Examiner is asked to issue a Notice of Allowance allowing all claims now pending, claims 1-38. If any issues remain outstanding prior to allowance, the Examiner is requested to contact the undersigned attorney so that they may be expeditiously resolved.

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Respectfully submitted,  
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Version with Markings to Show Changes Made

IN THE DETAILED DESCRIPTION

Paragraph beginning at line 10 of page 1:

As the use of the Internet has become more and more popular, various database systems have been developed to track information that is associated with each of the [user's] users at an Internet site. These database systems can [stored] store demographic information, a [user] list of user preferences, or other information about each of the users of a particular site.

Paragraph beginning at line 30 of page 1:

Therefore, there is a need for a system that is efficient in handling large numbers of transactions. Furthermore, there is a need for a system that [is] does not introduce interdependencies between each of the pages of the database. Thus, if one of the pages is contaminated, the other pages remain unaffected by the contamination.